



Asteghik Khajetoorians

Partner

asteghik.khajetoorians@millernash.com

949.637.1041 mobile

June 5, 2015

VIA U.S. MAIL AND ELECTRONIC MAIL

Ms. Kristine Koch
Remedial Project Manager
United States Environmental Protection Agency
Region 10
1200 S.W. Sixth Avenue, Suite 900
Seattle, Washington 98101-3140
Koch.kristine@epa.gov

Mr. Bob Wyatt
Chairman, Lower Willamette Group
c/o Northwest Natural
220 N.W. Second Avenue
Portland, OR 97209-3943
rgw@nwnatural.com

Re: Requested Corrections to Statements in the EPA Draft Final Section 1 of the Feasibility Study (Lower Willamette River, Portland Harbor Superfund Site; Docket No. CERCLA-10-2001-0240)

Dear Ms. Koch and Mr. Wyatt:

On behalf of Atlantic Richfield Company ("Atlantic Richfield"), we submit the following objection and comments to the draft Feasibility Study (FS) Section 1 with the file name "2015-01-09 Proposed Final Portland Harbor FS Section 1.docx" (Proposed Final FS Section 1). We understand FS Section 1 represents the U.S. Environmental Protection Agency's (EPA) most recent proposed modifications to Chapter 1 of the Draft FS which was submitted by the Lower Willamette Group (LWG). Atlantic Richfield objects to the document's description of the light non-aqueous phase liquid (LNAPL) and groundwater plumes at the BP West Coast Product LLC's Portland Terminal (BP Terminal) for the reasons set forth below. In brief, the description is inaccurate and

Portland, OR
Seattle, WA
Vancouver, WA
Bend, OR
Long Beach, CA

MILLERNASH.COM

USEPA SF



1412921

Ms. Kristine Koch
Mr. Bob Wyatt
June 5, 2015
Page 2

does not reflect the actual status of the historic and current source control implemented at the BP Terminal pursuant to oversight by Oregon Department of Environmental Quality (DEQ).

Specifically, Atlantic Richfield objects and provides comments to text in two parts of the Draft Final FS Section 1, Section 1.2.3.4. These are as follows:

- (1) **“BP Arco Bulk Terminal (ECSI Site ID 1528) – A TPH plume has discharged to the river. Contaminants include TPH (gasoline-range and diesel-range hydrocarbons) and LNAPL, and the plume extended under the adjacent downstream property.” (See Draft Final FS Section 1 (June 2, 2015) at 1-15).**

Atlantic Richfield Comments:

First, because it is a separate phase, LNAPL cannot from a technical perspective be a "Contaminant" of a groundwater TPH plume. While it may be appropriate to list contaminants including gasoline-range and diesel-range hydrocarbons, LNAPL should be removed from this sentence.

Second, this overly simplified statement does not accurately represent what is occurring at the BP Terminal. Since the 1960s, Atlantic Richfield has been proactively implementing source control measures (SCMs) to prevent releases to the Willamette River including the following. A storm water collection system and two oil/water separators were installed in 1968 to control storm water runoff. Groundwater interceptor wells were installed in 1971 to address impacted groundwater, and additional interceptor wells were added in 1994. In 2004, Atlantic Richfield commenced additional extensive SCMs as discussed in detail below that have eliminated the LNAPL plume as a potential source of contamination to the Willamette River, and almost entirely eliminated discharge of impacted groundwater. These activities have been completed under the oversight of DEQ, in accordance with the February 2001 Memorandum of Understanding which established DEQ's authority to implement upland source controls. Having completed containment of the LNAPL, Atlantic Richfield is continuously monitoring and instituting improved and/or additional remedial measures to address its upland source of impacted groundwater.

Ms. Kristine Koch
Mr. Bob Wyatt
June 5, 2015
Page 3

The SCMs completed by Atlantic Richfield include:

1. **Hydraulic SCM:** The historical groundwater pump and treat system was replaced with a new pump and treat hydraulic SCM treatment system in late 2004 and early 2005. The new hydraulic SCM system was installed to improve the containment of LNAPL and impacted groundwater. Operation of the hydraulic SCM system began in 2005. A detailed description of the hydraulic SCM system and adjustments to the system can be found in the Hydraulic Source Control Implementation Report (URS, 2006).
2. **Seawall Replacement SCM:** In 2007, the original approximately 900-ft long concrete seawall (installed in the 1940s) was replaced with a new steel sheet pile seawall. The replacement sheet pile wall extends approximately 10 feet deeper than the old concrete seawall, embedding the new wall into an underlying fine grained lithologic unit. The seawall replacement provides not only a seismic upgrade but also improved the ability of the seawall to contain LNAPL and dissolved-phase contaminants. The new sheet pile wall was secured in place with grouted tieback anchors installed horizontally through the face of the wall into subsurface soils. A detailed description of the Seawall Replacement SCM design can be found in the Revetment SCM Basis of Design (BOD) Report (URS, 2007). Details on the implementation of the Seawall Replacement SCM are provided in the Interim Construction Report Revetment SCM (URS, 2009).
3. **Revetment Removal SCM:** The revetment removal SCM involved the removal of a former concrete revetment riverward of the seawall and voluntary removal of impacted soil and river sediments. This SCM included the removal of approximately 13,300 cubic yards of impacted material and placement of 12,900 cubic yards of clean fill and was completed in 2007 and 2008, with final restoration of the riverbank completed in 2009. Details on the implementation are provided in the Interim Construction Report Revetment SCM (URS, 2009).

After completion of these three SCMs, capture zone analysis demonstrated that the LNAPL plume was fully contained and not migrating to the river (URS, 2011, 2012). A detailed groundwater flow and fate and transport model was presented in the Groundwater Modeling Report (URS, 2013). In 2014, Atlantic Richfield prepared an Interim Remedial Measure Work Plan for expansion of the hydraulic containment system (URS, 2014). DEQ approved the Groundwater Modeling Report (DEQ, 2014a) and the Interim Remedial Measure Work Plan (2014b) stating in both letters: "Overall,

Ms. Kristine Koch
Mr. Bob Wyatt
June 5, 2015
Page 4

DEQ considers the existing hydraulic containment system effective in containing the majority of the TPH plume of contamination within the uplands portion of the site [BP Terminal]. ”

The current state of source control at the BP Terminal is accurately summarized by DEQ on page 78 of their Portland Harbor Source Control Report (2014c):

“Groundwater pump and treat landward of the concrete seawall started in the 1970’s. Significant expansion of the hydraulic containment system occurred in 2005. Based on groundwater performance monitoring and a numeric groundwater model, DEQ determined that the wall and hydraulic containment system provides adequate containment of liquid phase hydrocarbons [LNAPL] and dissolved phase constituents, except for a relatively small amount of flow and dissolved phase constituents around the north end of the wall. While control is not yet complete, additional hydraulic containment to address this issue is planned to be operational in early 2015.”

Noteably, EPA’s previous drafts of the Portland Harbor FS Section 1, including one dated July 8, 2014 and another dated September 17, 2014, referenced the relevant information regarding the SCMs incorporated at the BP Terminal:

“BP Arco Bulk Terminal – A TPH plume has discharged to the river. Contaminants include TPH (gasoline-range and diesel-range hydrocarbons) and LNAPL, and the plume extended under the adjacent downstream property. A sheet-pile wall with groundwater hydraulic control system is in place. A groundwater pump and treat system and LNAPL recovery system is in use.”

Atlantic Richfield Requested Revision:

Atlantic Richfield requests the following modification to present an accurate description of the current source control status as follows:

“BP Arco Bulk Terminal (ECSI Site ID 1528) – A TPH plume has historically discharged to the river. Contaminants include TPH (gasoline-range and diesel-range hydrocarbons) ~~and LNAPL~~, and the plume extended under the adjacent downstream property. **A sheet-pile wall with groundwater hydraulic control system is in place. A groundwater pump and treat system and LNAPL recovery system is in use. These measures have eliminated LNAPL discharge to the river**

Ms. Kristine Koch
Mr. Bob Wyatt
June 5, 2015
Page 5

and any limited migration of dissolved-phase contaminants is restricted to a small area at the northern property boundary, which is being addressed through expansion of the system in 2015.”

- (2) “Figure[s] ... show the nature and extent of known contaminated groundwater plumes currently or potentially discharging to the river.” (See Draft Final FS Section 1 (June 2, 2015) at 1-14).

Atlantic Richfield Comment: The foregoing statement is inaccurate with respect to the BP Terminal for the reasons stated above.

Atlantic Richfield Requested Revision: “Figure[s] ... show the nature and extent of known contaminated groundwater plumes in the vicinity of the Portland Harbor Superfund Site currently or potentially discharging to the river.”

We greatly appreciate the opportunity to submit Atlantic Richfield's objection and comments for EPA's consideration. Please do not hesitate to contact me with any questions or comments at (949) 637-1041 or Asteghik.Khajetoorians@millernash.com.

Very truly yours,



Asteghik Khajetoorians
Partner

cc: Lori Cohen (Associate Director, EPA, Region 10) (cohen.lori@epa.gov)
Richard Muza (RPM, EPA, Region 10) (muza.richard@epa.gov)
Sean Sheldrake (RPM, EPA, Region 10) (Sheldrake.sean@Epamail.epa.gov)

Ms. Kristine Koch
Mr. Bob Wyatt
June 5, 2015
Page 6

References

- DEQ, 2014a. *Groundwater Modeling Report, Response to Comments*, BP Terminal 22T, Letter dated March 19.
- DEQ, 2014b. *Comments on Interim Remedial Measure Work Plan*, BP Terminal 22T, Letter dated September 17.
- DEQ, 2014c. *Portland Harbor Upland Source Control Summary Report*, November 21.
- URS, 2006. *Final Source Control Implementation Report*, BP Bulk Terminal 22T, July.
- URS, 2007. *Basis of Design Report Revetment Source Control Measure*, BP Bulk Terminal 22T, March.
- URS, 2009. *Draft Interim Construction Report Revetment Source Control Measure*, BP Bulk Terminal 22T, March.
- URS, 2011. *Groundwater Recontamination Assessment Report*, BP Bulk Terminal 22T, January.
- URS, 2012. *Response to Remaining DEQ Comments, Groundwater Recontamination Assessment Report*, BP Bulk Terminal 22T, June 29.
- URS, 2013. *Groundwater Modeling Report*, BP Bulk Terminal 22T, July.
- URS, 2014. *Interim Remedial Measure Work Plan*, BP Bulk Terminal 22T, July.